65. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 64 wherein,

a quarter wave plate is polymerized as a first step, having a temperature and an ultraviolet radiation for polymerizing the quarter wave plate.

66. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 65 wherein,

there are three sub-pixels each having a different quarter wave plate for a different primary color, each quarter wave plate having a separate mask, a separate temperature of polymerization and a separate ultraviolet radiation to polymerize the cholesteric liquid crystal material.

67. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 65 wherein,

a broadband polarizer cholesteric liquid crystal is polymerized on the opposite side of the layer from the quarter wave plate by the layer being set to at least one polymerization temperature and irradiated with at least one ultraviolet radiation to polymerize the broadband cholesteric liquid crystal material.

68. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 66 wherein,

a broadband polarizer cholesteric liquid crystal is polymerized on the opposite side of the layer from the quarter wave plate by the layer being set to at least one polymerization temperature and irradiated with at least one ultraviolet radiation to polymerize the broadband cholesteric liquid crystal material.

69. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 38 wherein:

the mixture of cholesteric liquid crystal material having at least one polymerizable liquid crystal component and at least one non-polymerizable liquid crystal component.

70. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 69 wherein:

the polymerizable liquid crystal component in the mixture of cholesteric liquid crystal material is a monomer.

71. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 69 wherein:

the polymerizable liquid crystal component in the mixture of cholesteric liquid crystal material is an oligmer.

72. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 69 wherein:

the non-polymerizable liquid crystal component in the mixture of cholesteric liquid crystal material is a nematic.

73. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 69 wherein:

the non-polymerizable liquid crystal component in the mixture of cholesteric liquid crystal material is a chiral additive.

74. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 69 wherein:

the non-polymerizable liquid crystal component is phase segregated from the polymerizable liquid crystal and diffuses along the UV field to generate a pitch gradient.

75. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 73 wherein:

the diffusion rate of the non-polymerizable liquid crystal component is slower than the polymerization rate of the polymerizable liquid crystal.

76. A reflective cholesteric liquid crystal color filter manufacturing process as in claim 73 wherein:

the pitch distribution of the cholesteric liquid crystal is nonlinear.

77. An image display panel employing the recycling of light from a plurality of light reflective elements therewithin so as to produce color images with enhanced brightness for viewing by a viewer, said image display panel comprising:

a backlighting structure including

a light source for producing light consisting of spectral components having wavelengths over a substantial portion of the visible band of said electromagnetic spectrum, and

a broad-band reflector for reflecting, within said backlighting structure, polarized light consisting of spectral components having wavelengths over a substantial portion of said visible band and, upon one or more reflections within said backlighting structure, converting the polarization state of said spectral components from a first polarization state (P1) to a second polarization state (P2) orthogonal to said first polarization state (P1), and from said second polarization state (P2) to said first polarization state (P1);

a plurality of pixel regions spatially encompassed within a predefined image display area definable relative to said backlighting structure, wherein each said pixel region spatially encompasses a plurality of subpixel regions and each said subpixel region within each said spatially-encompassing pixel region has a predefined spectral band over the visible band of the electromagnetic spectrum,

each said subpixel region within each said pixel region having a light transmission portion and a light blocking portion, and each said light transmission portion and said light blocking portion having a frontside disposed in the direction of said viewer and a backside in the direction of said backlighting structure;

a broad-band reflective polarizer for reflecting light consisting substantially of spectral components having wavelengths over a substantial portion of said visible band and said first polarization state (PI), and transmitting a distribution of polarized light along a prespecified direction, substantially confined within said predefined image display area, and consisting substantially of spectral components having wavelengths over a substantial portion of said visible band and said second polarization state (P2);

a spatial intensity modulation structure including

an array of polarization modifying elements, each said polarization modifying element being spatially registered with one said subpixel region and selectively modifying the polarization state of polarized light transmitted therethrough in response to a subpixel drive signal provided to said polarization modifying element, and